

REMARKS

In the Office Action dated May 23, 2008, all of the presently pending application claims 50, 54-58 and 67-81 were rejected, with claims 50, 76 and 81 being independent claims. Claims 1-49, 51-53 and 59-66 previously were cancelled. Claims 50 and 77-80 are amended herein.

Claims 50, 54, 56-58, 67-69, 71-73 and 75-80 were rejected under 35 U.S.C. Section 102(b) as being anticipated by U.S. Statutory Invention Registration H1745 to Paraschac (hereinafter referred to as "Paraschac"). Claims 50, 54, 56, 58, 67-70 and 72-75 were rejected under 35 U.S.C. Section 102(b) as being anticipated by U.S. Patent 5,151,102 to Kamiyama et al. (hereinafter referred to as Kamiyama). Dependent claim 55 was rejected under 35 U.S.C. Section 103(a) as being unpatentable over Paraschac as applied to independent claim 50. Claim 81 was rejected under 35 U.S.C. Section 103(a) as being unpatentable over Paraschac in view of U.S. Patent 3,987,795 to Morrison (hereinafter referred to as Morrison). The applicant has carefully considered the Office Action and the references cite therein.

In response to the above-noted rejections, applicant amends independent claim 50 to further clarify the claimed subject matter, amends dependent claims 77-80 to correct dependency, and respectfully provides remarks pointing out errors in the Examiner's reading of the prior art and attempted use thereof to support the respective rejections. Applicant believes that a proper reading of the prior art leads to one conclusion, namely that all of the pending claims 50, 54-58 and 67-81 are allowable and that this application is in condition for allowance.

Paraschac Does Not Teach or Suggest The Structure in Claim 50 or the Structure in Claims 54-58 and 67-75 that Depend Therefrom

Independent claim 50 is generally directed to a cardiac tissue ablation apparatus. The apparatus comprises first and second jaw assemblies which are relatively movable between open and closed positions, respectively, to receive and compress cardiac tissue therebetween. Each jaw assembly has an elongated electrically conductive member for ablating tissue between the jaw assemblies. The conductive members of the jaw assemblies are in face-to-face relation and connectible to a bipolar energy power source so as to be of opposite polarity when so connected for providing an electrical current through a selected tissue ablation area that is located between the jaw assemblies.

Amended claim 50 further recites, "each jaw assembly including at least one internal jaw support member and including an insulative cover that surrounds the internal jaw support member, wherein the internal jaw support member is insulated relative to and does not contact the conductive member of the respective jaw assembly." (Emphasis added).

By way of example, the application shows and describes an ablation apparatus at Figures 28-32, which includes an internal jaw support member (e.g., stainless steel structural support 82). Such internal jaw support member has an insulative cover that surrounds the support member 82. The jaw support member also is insulated relative to and does not contact the respective electrodes 94, 96. See Figures 28-32, and Paragraphs 107-110.

The Examiner cites Paraschac in rejecting claim 50 as anticipated. In particular, the Examiner refers to Fig. 5 of Paraschac and cites the elements 147, 148 as providing

for each jaw the respective claimed elongated electrically conductive member, the elements 134, 164 as providing the respective claimed internal jaw support, and the elements 146, 156 as providing the respective claimed insulative cover that surrounds the respective internal jaw support member with the internal jaw support member being insulated relative to the conductive member of the respective jaw assembly.

It is respectfully submitted that the Examiner is misreading Paraschac and that Paraschac does not teach or suggest the structure claimed in amended claim 50. A proper reading of Paraschac, with reference specifically to Fig. 5 and the specification at col. 4, line 59 –col. 5, line 10, indicates that the jaw members 116, 117 of Paraschac include electrodes 147, 148 respectively, with the electrodes having tissue grasping surfaces 118, 119 respectively that are *exposed at all times*. The jaw members 116, 117 also include an outer insulative coating 146, 156 which covers only a portion of the respective outer surface of the electrodes 147, 148. The jaw members 116, 117 further include an inner U-shaped insulator 134, 164 which similarly covers only a portion of the respective inner surface of the electrodes 147, 148.

Importantly, this results in a structure where neither jaw 116 or 117 has a jaw support member that is *surrounded by an insulative cover* in a manner such that the internal jaw support member is *insulated relative to and does not contact* the conductive member of the respective jaw assembly. This is true because firstly, the electrodes 147, 148 are not surrounded by an insulative cover. In fact, they purposefully are not and must leave exposed the surfaces 118, 119 to be operational. Secondly, each electrode 147, 148 simply cannot be an elongated electrically conductive member and an internal jaw support member that is insulated from and does not contact the

elongated electrically conductive member, i.e., it physically is not possible for element 147 or 148 to be insulated from and not contacting itself.

Thus, Paraschac does not teach or suggest every limitation of amended independent claim 50, most notably because it does not teach or suggest the claimed structure of the jaw assembly, inter alia, wherein each jaw assembly includes at least one internal jaw support member and includes an insulative cover that surrounds the internal jaw support member and wherein the internal jaw support member is insulated relative to and does not contact the conductive member of the respective jaw assembly.

Accordingly, it is respectfully asserted that amended claim 50 is allowable. Moreover, given that claim 50 should be allowable, each of claims 54-58 and 67-75, which are claims depending directly therefrom and adding further limitations thereto, also should be allowable.

Paraschac Does Not Teach or Suggest The Structure in Claim 76 or the Structure in Claims 77-80 that Depend Therefrom

Independent claim 76 recites, inter alia, that each jaw assembly includes an elongated electrically conductive member for ablating tissue between the jaw assemblies, at least one internal jaw support member and "an insulative cover that sufficiently surrounds the internal jaw support member to prevent contact of such internal jaw support member with the selected ablation area." (Emphasis added).

The application shows and describes an example ablation apparatus at Figures 28-32, which includes an internal jaw support member (e.g., stainless steel structural support 82) and respective electrodes 94, 96. Such internal jaw support member has

an insulative cover that sufficiently surrounds the internal jaw support member 82 to prevent contact of such internal jaw support member with the selected ablation area. See Figures 28-32, and Paragraphs 107-110.

The Examiner cites Paraschac in rejecting claim 76 as anticipated. In particular, the Examiner again refers to Fig. 5 of Paraschac, however with respect to claim 76, the Examiner cites the elements 118, 119 as providing for each jaw the respective claimed elongated electrically conductive member, the elements 147, 148 as providing the respective claimed internal jaw support, and the elements 134, 164, 146, 156 as providing the respective claimed insulative cover that sufficiently surrounds the respective internal jaw support member to prevent contact of the internal jaw support member with the selected ablation area.

It is respectfully submitted that the Examiner again is misreading Paraschac, and that Paraschac does not teach or suggest the structure claimed in claim 76. As noted above, a proper reading of Paraschac, with reference specifically to Fig. 5 and the specification at col. 4, line 59 –col. 5, line 10, indicates that the jaw members 116, 117 of Paraschac include electrodes 147, 148 respectively, with the electrodes having tissue grasping surfaces 118, 119 respectively *that are exposed at all times*. The jaw members 116, 117 also include an outer insulative coating 146, 156 which covers only a portion of the respective outer surface of the electrodes 147, 148. The jaw members 116, 117 further include an inner U-shaped insulator 134, 164 which similarly covers only a portion of the respective inner surface of the electrodes 147, 148.

Notably, this results in a structure where neither jaw 116 or 117 has a jaw support member that is sufficiently surrounded by an insulative cover in a manner such

that the internal jaw support member is prevented from contacting the selected ablation area. This is true because firstly, the elements 134, 164, 146, 156 do not sufficiently surround the elements 147, 148 (the actual electrodes of Paraschac) to prevent the elements 147, 148 from contacting the selected ablation area. Secondly, the surfaces 118, 119 of elements 147, 148 (the actual electrodes) cannot be defined as the electrodes without the elements 147, 148 also being the electrodes, and again, the elements 147, 148 are not sufficiently surrounded by an insulative cover to prevent them from contacting the selected ablation area. Indeed, Paraschac includes the surfaces 118, 119 of the respective elements 147, 148 which are purposefully designed to contact the selected ablation area, and the device would not work for its intended purpose without such exposed surfaces. To surround Paraschac's electrodes with an insulative cover as so claimed in claim 76 would inhibit the operation of Paraschac's device and prevent Paraschac from achieving its objective, namely, to provide a wide treatment zone that essentially spans the entire width of (and outside of) the jaws. Thus, any such modification would be counterintuitive and nonproductive with respect to Paraschac's purpose to provide an electrosurgical cutting tool. Thus, Paraschac does not have electrodes that are permitted to contact the selected ablation area while also having internal jaw supports that are sufficiently surrounded in an insulative cover so as to be isolated from the selected ablation area.

Therefore, Paraschac does not teach or suggest every limitation of claim 76, most notably because it does not teach or suggest the claimed structure of the jaw assembly, inter alia, wherein each jaw assembly includes an elongated electrically conductive member for ablating tissue between the jaw assemblies, at least one internal

jaw support member, and further includes an insulative cover that sufficiently surrounds the internal jaw support member to prevent contact of such internal jaw support member with the selected ablation area.

Accordingly, it is respectfully asserted that claim 76 is allowable. Moreover, given that claim 76 should be allowable, each of amended claims 77-80, which have been amended to properly depend from claim 76 and add further limitations thereto, also should be allowable.

Kamiyama Does Not Teach or Suggest The Structure in Claim 50 or the Structure in Claims 54-58 and 67-75 that Depend Therefrom

The structure claimed in independent claim 50 is referenced above at page 8 in the discussion of how claim 50 is patentable over Paraschac, and generally is directed to a cardiac tissue ablation apparatus. The apparatus comprises first and second jaw assemblies which are relatively movable between open and closed positions, respectively, to receive and compress cardiac tissue therebetween. Each jaw assembly has an elongated electrically conductive member for ablating tissue between the jaw assemblies. The conductive members of the jaw assemblies are in face-to-face relation and connectible to a bipolar energy power source so as to be of opposite polarity when so connected for providing an electrical current through a selected tissue ablation area that is located between the jaw assemblies.

Amended claim 50 recites, inter alia, “each jaw assembly including at least one internal jaw support member and including an insulative cover that surrounds the internal jaw support member, wherein the internal jaw support member is insulated

relative to and does not contact the conductive member of the respective jaw assembly." (Emphasis added).

As noted above, the present application shows and describes an ablation apparatus at Figures 28-32, which includes an internal jaw support member (e.g., stainless steel structural support 82). The internal jaw support member has an insulative cover that surrounds the support member 82 and which ensures the jaw support member is insulated relative to and does not contact the respective electrodes 94, 96. See Figures 28-32, and Paragraphs 107-110.

The Examiner cites Kamiyama in rejecting claim 50 as anticipated. In particular, the Examiner refers to Figs. 2 and 4 of Kamiyama and cites the element 10 as providing a respective jaw assembly, the element 10f as providing the respective claimed elongated electrically conductive member, the elements 10b as providing the respective claimed internal jaw support, and the element 10a as providing the respective claimed insulative cover that surrounds the respective internal jaw support member with the internal jaw support member being insulated relative to the conductive member of the respective jaw assembly.

It is respectfully submitted that the Examiner is misreading Kamiyama and that Kamiyama does not teach or suggest the structure claimed in amended claim 50. A proper reading of Kamiyama, with reference specifically to Figs. 2 and 4 and the specification at col. 3, lines 4-23 and lines 48-54, indicates that the jaw member 10 of Kamiyama includes multiple electrodes 10b formed of a conductive resin adhesive, as well as an electrode 10f. All of these electrodes 10b and 10f have surfaces that are *exposed at all times*. The jaw member 10 also includes an insulative contact member

10a having holes through which the multiple electrodes 10b and single electrode 10f are exposed. In addition Kamiyama notes that the number of electrodes 10b must be controlled, because they have a negative impact on the mechanical strength of the contact member 10a.

Of note, this results in a structure where the jaw 10 of Kamiyama does not have a jaw support member that is *surrounded by an insulative cover* in a manner such that the internal jaw support member is insulated relative to and does not contact the conductive member of the respective jaw assembly. This is true because firstly, the electrodes 10b simply are not surrounded by an insulative cover. In fact, this is by design as they must have exposed surfaces to be operational. Secondly, the electrodes 10b do not function as a *jaw support member* and it is stated that they actually reduce the mechanical strength of, i.e. weaken the jaw component 10a in which they are formed.

Thus, Kamiyama does not teach or suggest every limitation of claim 50, most notably because it does not teach or suggest the claimed structure of the jaw assembly, inter alia, wherein each jaw assembly includes at least one internal jaw support member and includes an insulative cover that surrounds the internal jaw support member and wherein the internal jaw support member is insulated relative to and does not contact the conductive member of the respective jaw assembly.

Accordingly, it is respectfully asserted that amended claim 50 is allowable. Moreover, given that claim 50 should be allowable, each of claims 54-58 and 67-75, which are claims depending directly therefrom and adding further limitations thereto, also should be allowable.

**Paraschac in view of Morrison Does Not Teach or Suggest
The Structure in Claim 81**

Independent claim 81 is quite similar to independent claim 50, but includes, inter alia, “each jaw assembly including at least one internal jaw support member and including an insulative cover that completely surrounds the internal jaw support member.” (Emphasis added). This structure is shown in the application, for example, as noted above in reference to Figures 28-32, and Paragraphs 107-110.

In Paraschac, as discussed above in detail, the elements 147, 148 (cited by the Examiner as being the internal jaw support members) only have a portion of their surface covered by an insulative material. Paraschac's insulative cover sections 134, 164, 146, 156 do not extend around the entire surface of the elements 147, 148. See Figures 3 and 5. Indeed, this is by design because the device of Paraschac would not function for its intended purpose if the elements 147, 148, which actually are the electrodes, were completely surrounded. Thus, a complete insulative cover surrounding the elements 147, 148 would be directly contrary to the teachings and intended purpose of Paraschac because Paraschac's electrodes would fail to contact the selected tissue region for delivering a coagulation current.

In addition, this important structural distinction is not cured by mere reference to the teachings of Morrison. The Examiner states that Morrison teaches an internal jaw support member 32 (an electrode) completely surrounded by an insulative cover 36 in Fig. 34, in a bipolar jaw assembly (referring to a vague expression at col. 4, lines 20-24) in order *to ensure that arcing occurs at both electrodes* (referring to discussion at col. 9, lines 42-45). However, as shown in Figs. 1 and 34 of Morrison, and discussed in col. 4 lines 1-3 and 25-26, and col. 9, lines 56-64, Morrison teaches an implement with a

single blade 16, having a pair of electrodes 32, 34, and not a device with first and second jaw assemblies. It would appear that this structure, having two electrodes active in the same axial direction and being operative axially outward from a distal end of a single blade structure, would have been the motivation that drove any structural modifications regarding how the electrodes were to interact with the tissue or each other in Morrison. However, nothing like this structure is present in the opposed jaw assemblies that face each other in Paraschac, and indeed Paraschac would not present the same issue as to *ensuring that arcing occurs at both electrodes* that was present in the design of the structures in Morrison.

Furthermore, there is no suggestion provided by the Examiner as to why one of ordinary skill in the art that was aware of Paraschac would have had any motivation to look to Morrison to provide a completely surrounded internal jaw support member, regardless of its particular structure. Presumably, the device of Paraschac worked as intended, without an internal jaw support member that was completely surrounded by an insulative cover. Moreover, there is no discussion of how the specific device shown in Fig. 34 of Morrison would be modified if one were to attempt to utilize it in a device having a pair of jaws. Rather, the reference to col. 4, lines 20-24 merely states that the technology, in its broadest conception, could be employed in surgical devices such as forceps, etc., but does not provide any guidance as to which portions of the disclosure could be utilized or how such would be accomplished.

In addition, the electrodes of Morrison are not internal jaw supports, they are the operative electrodes of the device. They necessarily are not completely surrounded by an insulative cover because that would prevent their intended function. For instance, as

described in Morrison, the electrodes may be slightly recessed or covered by a *porous* coating that permits the electrode to still function and affect the selected tissue. See col. 9, lines 3-65.

Thus, Paraschac does not teach or suggest every limitation of claim 81, and one of ordinary skill in the art would not have looked to Morrison in search of an internal jaw support member that is completely surrounded by an insulative cover. The lack of such structure and teaching in Paraschac is not found in or remedied by reference to Morrison, most notably because there is no teaching or suggestion of the claimed structure, inter alia, first and second jaw assemblies with each jaw assembly including at least one internal jaw support member and including an insulative cover that completely surrounds the internal jaw support member.

Accordingly, it is respectfully asserted that claim 81 is allowable.

Conclusion

Applicant appreciates the examiner's consideration of this Response. Based on the foregoing amendments and remarks, it is respectfully submitted that all of the pending claims 50, 54-58 and 67-81 are in condition for allowance. If the examiner is of the opinion that a telephone conference would expedite the prosecution of this case, the examiner is invited to contact the undersigned at the number identified below.

This response does not increase the number of independent claims or the total number of claims. Accordingly, it is believed that no additional fees should be due for this response.

Respectfully submitted,

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By: /David M. Thimmig/
David M. Thimmig
Reg. No. 36,034
Cook Alex Ltd.
200 West Adams St., Ste. 2850
Chicago, IL 60606
Telephone: (312) 236-8500
Attorneys for Applicant